

PRACTICAL TREATISE

ON THE

DIFFERENT FEVERS

OF THE

WEST INDIES,

AND THEIR

DIAGNOSTIC SYMPTOMS.

BY

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London:

PRINTED FOR H. D. SYMONDS, PATERNOSTER-ROW.

BY EYE AND LAW, ST. JOHN'S-SQUARE.

1800.

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TO THE
PRESIDENT AND FELLOWS
OF THE
ROYAL COLLEGE OF PHYSICIANS,
LONDON.

GENTLEMEN,

YOUR time is better employed than in reading dedications uselessly long, and mine ought to be otherwise spent than in writing such.

Permit me to place under your protection a plain narrative of facts; which, as I know it is not ornamented by theory, I trust you will find neither warped nor disguised by it. Gentlemen of your extensive reading and practice well know how few histories of diseases a medical library contains, even
among

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among the works of the best practical writers, where theory has not been much too busy. You also can make allowances for any literary oversights in what was chiefly drawn up amidst the hurry of a military life, and when I was myself slowly recovering from one of the fevers which are the subject of this treatise. I print it, because I am told it may be useful: I beg to dedicate it to you, as the best judges on such a subject.

I have the honour to be,

GENTLEMEN,

Your most obliged,

and devoted humble Servant,

WILLIAM FOWLE.

*On duty at Southampton,
July 1800.*

P R E F A C E.

IT may perhaps be necessary to explain my motives for adding one book more to the list of publications respecting the diseases of the West Indies. Long before I went out with the troops destined for that part of the globe, the great prevalence of the *Yellow Fever* had attracted the notice of the public, more particularly of the medical part of it. Numerous publications appeared, many of them differing very materially from each other, not only as to the origin of this fever, but also in the descriptions of its symptoms, and still more in the method of cure. By testimonies so different, yet many
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of them receiving authority from the names of men deservedly high in their profession, the minds of persons at a distance were harrassed, and their opinions divided with respect to the degree of credit to be given to the several authors. While I had no idea of being engaged in contending with the diseases of that unhealthy climate, I read these descriptions, rather as a matter of curiosity; retaining hopes, that, in some short period of time, succeeding observations would clearly ascertain, in whose descriptions and method of cure we were to confide. But, when I was entrusted with the important charge of the health of such a great body of men just on the point of being exposed to that dreadful disease, it became then, of the greatest consequence, that I should again attentively peruse what had been written on the subject; and, weighing the opinions of each writer, that

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I should form in my own mind, as nearly as possible, the most eligible plan to pursue. The more I read, the more I was in doubt. In many of them I met with a detail of symptoms, apparently so accurate, and the method of cure, as far as I could judge, so justly laid down, that I could by no means withhold my conviction that the disease so described had most undoubtedly been the subject of observation. Whence then these variations in the yellow fever? and whence such doubts concerning its origin? These questions naturally arose in my mind, but I could find no clue to unravel them; I determined therefore to keep myself as free as possible from prejudice, to attend to the symptoms as they arose, to act as the exigencies of the case seemed to point out, without paying attention to the plan laid down by any particular author.—Very early after my arrival in the country, I observed,

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that persons attacked with fever, in almost any situation, very generally became yellow. This soon led me to conceive it merely a concomitant symptom, and by no means such as could be sufficiently characteristic of any one fever, to give it a particular denomination: it also led me to discover the cause of the variety of symptoms attributed by different authors to the *Yellow Fever*, and to account for successful methods of cure which were often diametrically opposite to each other. The longer I remained in the country, the more I was convinced of the danger attendant on giving a name to one disease from a symptom common to so many.—An order coming out that all the medical officers at that time on the Leeward Island staff should deliver in their opinions on the diseases of the troops in the West Indies, together with the most successful method of cure, &c. through the Inspector
General

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General of the Leeward Island Hospitals to the Army Medical Board; I conceived I could not better answer the purpose proposed, than by submitting to them the observations I had made on the different diseases, laying a considerable stress on those symptoms that seem to point out more particularly the different fevers one from another; the mode of treatment being so essentially different, and the fevers of that climate being so quick in their progress, as to make a few hours' delay, for the purpose of ascertaining their tendency to remission, productive of the most imminent danger. In doing this, I found more matter than I expected press on me, and though I began with an intention of comprising all I had to say in a few sheets, I found at the conclusion, that I had written a little volume. On my return to England, having frequent occasion to converse with some medical friends on the subject of those diseases

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which I had been most in the habit of observing, and finding it difficult to explain my ideas as perfectly as I wished in conversation, I put a copy of the work into their hands. The observations there contained were conceived by them to lead to some important points of practice. I was advised and desired to make such additions as might render them more instrumental to the service of those who are likely to be engaged in the same line, and to offer them to the perusal of the public.

I have now complied with those desires; and at the end of this work, I have also added a few prescriptions for the use of young men who may be sent to that country, immediately on entering the army. I am well convinced, that such formulæ, having nothing very particular in them, might, for the generality of readers, have

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have been well omitted: but, from experience, I feel myself authorised to say, that many young men, who may undergo very strict examinations on the subjects of anatomy, surgery, and the symptoms and general cure of diseases, have still much to learn as to the compositions of medicines and their proper doses; and I here beg leave earnestly to request a more proper degree of attention to that subject.

The occasion of writing this book will account for many peculiarities in the style, more particularly the frequent introduction of the first person, which in a *report* was unavoidable; and, on preparing it for the press, I did not chuse to change the language more than I could avoid; for the report, being written on the spot, while every thing there related was under my eye, or very immediately in my recollection,

appeared

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appeared more likely to convey to my readers that impression I wish them to receive, than a more refined and studied style, after a greater lapse of time would have power to give.

It was thought useful for some of my readers, that I should say what I have prefixed as an introduction, which, however, I have not made any longer than appeared absolutely necessary.

INTRODUCTION.

THE Leeward Islands are situated within the tropic of Cancer, being scattered about from 11° to 19° north latitude, and from 59° to 65° longitude west. They are of different sizes, the largest about sixty miles in length, and half that number in breadth, while others are not more than three or four in circumference. They are, generally near their centre, composed of lofty mountains, the bases of which break into smaller hills, and these again into deep ravines inclining towards the sea, and furnishing channels

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to the numerous streams of water which issue from the mountains. Of these, many after pursuing their course, discharge themselves into the ocean, while others, when they come into the plain country, break from their beds, and lose themselves in the morasses, with which the Islands, particularly in their uncultivated state, generally abound.

The mountains are most commonly covered to the top with vast groves of timber, some trees of which are of a most stupendous size: a few others, however, which bear evident marks of a volcanic production (and in some of them volcanoes are still open) are almost totally free from vegetation, and raise their naked and pointed heads far beyond the region of clouds, forming a contrast at once beautiful and sublime.

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The plains are in very small proportion to the uneven grounds before-mentioned: these are chiefly situated near the shore; and as well as the ridges of ground which may be termed a continuation of the sides of the ravines, and also the smaller hills whose tops and sides are rounded into a very gentle acclivity, are covered with plantations of the sugar cane, and of coffee, with here and there an intermixture of provision-plantations. On these rising grounds the house of the planter is generally situated, surrounded in part with the tall cocoa tree, and the still more lofty mountain cabbage; while the orange and the cashew, the mango and the papaw trees interspersed, give an additional heightening to the beauty of the scene.

The towns are generally built on the low grounds, in the Bays, for the advantage of

an easy communication with the shipping. The houses are most, if not all, built without chimnies, a cooking house being run up at a little distance: they are generally furnished with numerous doors and windows, the latter of which are seldom glazed, on account of the necessity for a free admission of air, but have merely a Venetian blind, which may be opened or closed at pleasure. These towns are generally built on the sandy ground, as by these means they are rendered more dry, and consequently more healthy; where there is also a gentle rise from the sea, there is the like advantage: this is the case of St. Pierre's, in Martinique, which is also furnished with water in almost every street, affording a most agreeable and refreshing coolness; and I think that this town is nearly as healthy as any one of its size and population even in Europe. Some of the towns, however,

however, such as Castries in the Carenage, at the foot of Morne Fortuné, in the island of St. Lucia, and Fort Royal, in Martinique, and many others, are situated on more swampy grounds in the neighbourhood of marshes ; the inhabitants of these are more unhealthy, and are much troubled by insects, such as the mosquito, the sand-fly, &c. Indeed no remark can be more true than that which is general in the West Indies, that those places much infested by insects are always unhealthy.

The climate of all the West Indies, allowing for accidental variations occasioned by the different elevation of the land, and variety of soil, is nearly the same. As they lie within the tropics, and as the sun goes quite over them passing beyond them to the north, and never returning farther from them than thirty degrees to the south,

they are continually subjected to a degree of heat which would be intolerable, were it not that the trade wind, rising gradually as the sun gathers strength, blows in upon them from the sea, and refreshes the air in such a manner as to enable the inhabitants to follow their occupation, even at noon-day. In the larger and more mountainous islands, as the night advances, and the sea-breeze dies away, another breeze begins to be perceived, which blowing smartly from the hills in the centre, is conveyed to the shore from all points of the compass at once.

The seasons are generally divided into the wet and dry, of which there are two of each ; they may therefore be named as ours are, though they differ very much in period.

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The month of May may be said to constitute the vernal season. At that period of the year, the foliage becomes more vivid, and the parched country begins to lose its russet colour: the rains begin to fall about the middle of this month. These, though in Europe they would be termed very heavy, may here, when compared with those of the autumnal season, be considered as gentle showers: they generally fall about noon, and break up with thunder storms: they continue about a fortnight, and give great verdure to the country, and coolness to the atmosphere. The medium height of the thermometer may be stated at 75° *.

The weather after this becomes settled, the sky clear of clouds, and the heat into-

* Edwards's History of the West Indies, Vol. I. page 7.

lerable, were it not for the trade wind, which coming from the south-east, blows with great regularity from about ten in the morning till sun-set. The efficacy of this wind in cooling the air, and taking off that languor which is generally felt before it sets in, is so well known, that among the common people, particularly the sailors, it goes by the name of the Doctor. The thermometer during this period, that is, from the beginning of June to the middle of August, varies but little during the whole four and twenty hours. Its medium near the coast may be stated at about 80° *.

In the middle of August this wind begins to intermit, the atmosphere becomes sultry, and almost suffocating, the breezes

* Edwards's History of the West Indies, Vol. I. page 7.

are very small, and very intermitting: there is often for hours together so little wind, that you do not see the smallest leaf agitated, and the thermometer often exceeds 90° . The sky now begins to be filled, in the morning, particularly to the south and south-east, with large fleecy clouds, while at the same time the hills, which for the greater part of the year have their sides covered with clouds, are now perfectly free from them. About the middle of September this quantity of rain, which has been so long collecting, falls rather in the form of floods of water, poured from the clouds with immense impetuosity, than of showers of rain. The rivers rise in an instant, and all the low country is under water. It is in the autumnal rainy season that they are assaulted by hurricanes, the most terrible calamity to which the inhabitants of this country are liable. They are sudden

sudden and violent storms of wind and rain, thunder and lightning, attended with a furious swelling of the sea, and often with an earthquake; in short, with every circumstance which the elements can assemble that is terrible and destructive. Whole fields of sugar-canes are whirled into the air, branches of trees are torn off, and even the strongest trees themselves taken up by the roots; the sugar-mills are destroyed, all the utensils, even the ponderous copper boilers and stills are wrenched from the ground, and battered to pieces; the roofs of the houses are torn off, while the rain, which often rises four or five feet in an hour, rushes in with irresistible violence.

It does not come within my design either to guess at the causes, or to enumerate the phenomena which are considered by the inhabitants as presages of this dreadful
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visitation : it being sufficient for my purpose to mark those peculiarities of season, which may have an effect on the human constitution. I shall therefore merely observe, that these hurricanes seem to have no particular period for their return, and are said to conduce very much to the healthiness of the atmosphere, which they seem to effect by the destruction of the rank vegetation, and by sweeping all the dead and rotten matter into the sea in those torrents of water which fall at that time.

From the latter end of November, or the beginning of December, the wind shifts. It blows from east, north-east, and north, frequently attended, more particularly in the hilly country, with storms of very heavy rain ; but as the north wind acquires force, the atmosphere becomes clear and cool ; and from this time to the latter

end of April, the weather is truly delightful.

Such is the climate of the West Indies, taking it as a whole country, but in different situations there is a variety. As you ascend the hills in the internal part of the country, the air becomes cooler, indeed in many places so much so, as to permit several of the European fruits to arrive at perfection. Nor do we in these Islands suffer from the long continued drought prevailing in those which are chiefly composed of low lands; for here, as the cool sea-breeze begins to blow, the air, almost stagnant before its appearance, and rendered able, from being so thoroughly heated, to retain those great quantities of vapour exhaled by the force of the sun from the surface of the earth and the vegetables, is now, from its lightness, obliged to ascend: this air,
meeting

meeting with the mountains in its course, is there condensed, and the vapour forms into clouds, which hang on their sides till the sea-breeze intermit, or till by their condensation they become specifically heavier, when they again descend, and fall in showers on the surrounding country.

Those islands, few in number, which have very little rising ground, and consequently enjoy no land breeze, are in general very sparingly supplied with springs, and those they possess are commonly brackish. They are frequently not favoured with a single shower for many months ; their dependance, therefore, is on the water preserved in large tanks, from the time of the periodical rains ; and if these fail, they are obliged to employ schooners, and other light vessels, to obtain this necessary article

cle from the more mountainous islands, which, as we have before seen, are generally supplied with numerous springs.

These islands abound in almost all the fruits of a tropical climate, which seem to have been bestowed by the all-wise Providence, not only as a present gratification to the senses, but likewise as a preventative of those diseases liable to be produced by the heat of the climate.

Having said thus much concerning the appearance of the country, and the different seasons of the year, I shall now proceed to make a few observations on the various fevers, and the times and situations in which they are most general.

In the month of May, soon after the rains begin to fall, the ague and remitting fever

fever in general make their appearance, particularly on the hills, or in the neighbourhood of swamps. These, however, are much flightier, and more easily overcome than after the rainy season; for the country having been for some months dry, a greater quantity of moisture is absorbed, and at the same time the falls of rain being much more gentle, the atmosphere is not so furcharged with vapour; and the bodies of the inhabitants having been, in some degree, braced up by the more cool weather preceding, do not yield, in so great a degree, to the debilitating powers of the *miasmata*. As the hot and dry season sets in, this fever is less common: now the ardent species becomes the reigning epidemic; and when troops arrive from more moderate climates at this time of the year, they suffer very severely. This fever continues

tinues to rage with great force ; but as the autumnal season approaches, the inflammatory symptoms are less violent, while those of debility are more evident, rendering the disease (if I may be allowed the expression) less pure ; and as the rains set in, this fever ceases altogether, giving place to the remittent and typhus, which continue for some time after the rainy season : in general, to the middle or latter end of December. From that time till the falling of the vernal rains, I consider the cultivated parts of the West Indies to be as healthy as any in the globe. Where men are guilty of intemperance, and expose themselves to the night air, a few sporadic fevers occur : these seem to be generally of the inflammatory type.

It must be obvious, that in this place I am speaking merely of the cultivated grounds,

grounds, more particularly of those not very distant from the sea-shore, where the towns are chiefly situated. There are two other situations which are very different in their climate, and therefore produce very different and aggravated appearances of diseases. The one the more hilly parts of the country, where forts are built which require very strong garrisons. Many of these hills are composed of a stiff clayey soil, and the vegetation being very rapid, it is with the greatest difficulty their sides can be kept free from weeds and brushwood. The quantity of moisture evaporated from the vallies below is carried by the sea breeze upwards over these hills to the mountains, where, being condensed by the colder air, it hangs about their sides in clouds till the sea breeze cease; then as the land breeze springs up, it is driven from the mountains, sweeping in very

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cold storms along the lower hills: these falling on the clayey soil, the water is not absorbed, but when the rising sun begins to exert his power, is again evaporated, loading the whole atmosphere. The consequence is, the skin of the inhabitants being relaxed by this species of steam bath, is more liable to be acted on by the succeeding cold storms and night air. In such situations, agues, remitting fevers, and dysentery, make dreadful havock.

On the other hand, there are numerous vallies, which, from the ravages of war, or from other causes, have been suffered to become uncultivated. The ground, naturally spongy, receives the water flowing into it, and the whole country becomes a morass, whence issue the most noxious vapours: in many of these vallies the currents of air, which in some measure relieve

lieve and purify the hills and more open country, are greatly impeded, and you are for many hours inclosed in vapour. This is still worse after the autumnal rains, which pouring down in mighty cataracts wash all dead matter, either vegetable or animal, into these swamps, where, left to putrefy, it loads the atmosphere with effluvia ten-fold more dreadful. When troops (as must often occur during the business of war) are stationed in such situations, horrid indeed is the mortality. Remitting fevers, approaching nearly to typhus, here make their appearance, and often in the space of one or two days carry off the patient, who indeed almost before his death becomes a mass of corruption. While such places exist in the West Indies, and they always must exist while such depredatory war is carried on ; while the negroes, the Charaibs, and the Maroons, take every opportunity to

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plunder,

plunder, to burn, and to render the face of this fertile country one continued scene of devastation; while, I say, such causes exist, the country will always breed fever and pestilence, and destroy any European army that dares to approach it.

That the cultivation of the country renders it wholesome there can be no doubt. I am told that the island of St. Vincent, before it was cleared, was one of the most unhealthy in the West Indies; now, on the contrary, it is considered as one of the most salubrious: and I am informed, from good authority, that the ridge of hills, known by the name of *Morne Young*, situated quite to the windward of the island, is as healthy a spot for troops as any place whatever: while, on the contrary, St. Lucia, which abounds in the finest variety of ground, and where it may truly be
said,

faid, that every valley has its fast flowing rivulet of most excellent water, yet, from always having been a scene of contest between the two nations, and from other causes which keep it uncleared, almost the whole of it is a perfect nest of disease : so much so, that the countenance of a person resident there for some months is easily distinguished from that of the inhabitants of any other island.

OF THE

INTERMITTENT FEVER.

THE Intermittent Fever, or, as it is more generally termed, the Ague, is a very common and a very destructive disease among the troops in the West Indies, particularly in those islands which have not been well cultivated, or, having been laid waste during the present war, are now covered with grass and shrubs.

The general symptoms do not vary materially from those of the same disease in England, except that in many cases the *rigor* is not so great in proportion to the succeeding heat, being only a sensation of cold in the course of the spine; the expression

2 OF THE INTERMITTENT FEVER.

sion frequently made use of in answer to my enquiries was, that they did not *shake out*. The debility produced in these climates is much greater, and more early in its appearance, than we generally observe it in England. There is also greater nausea, very frequently violent vomiting during the paroxysm, and as may naturally be supposed, a much greater proportion of bile is thrown up. In many cases, also, the patients are not only afflicted with delirium during the paroxysm, but frequently in the intervals where no degree of fever is discoverable, either by the pulse, tongue, or skin, the derangement of the senses still continues. I never found this complaint remain for any great length of time after the ague was subdued. An enlargement of some of the viscera, particularly the spleen, is also a very common and a very early attendant.

The countenance soon becomes doughy, and the whole body shews very evident marks of a collection of water in the cellular

lular membrane. After the few first paroxysms, if the patient, either from an aversion to medicines, from situation, or from any other cause, has not been attended to with the greatest care, the fits become irregular, the fever degenerates into a remittent, and thence becomes continued, the strength is exhausted, the pulse soon sinks, and the patient dies in a few days with all the symptoms of the low nervous fever.

It frequently also happens, that where every attention is paid to the patient, though the disease yields for the time to the means made use of, yet, on the slightest irregularity, and very frequently even without any, the ague again makes its appearance; and in this manner, after reiterated attacks at uncertain periods, the viscera become materially affected, the glandular system totally deranged, and the long train of consequent diseases, as dropsy, dysentery, marasmus, &c. follows.

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The type is in general either quotidian or tertian; the quotidian is by far the most frequent: this commonly attacks persons of a weak, relaxed habit, or who are in any degree debilitated; while the tertian is seldom seen except in stout young men, who had before that time enjoyed perfect health. The *rigor* in the tertian is commonly pretty violent, and the succeeding symptoms appear of a more inflammatory nature; but the interval is not only longer, but also more complete; the stomach is by no means so weakened, consequently the appetite not so much injured, neither do visceral obstructions so frequently occur.

If I was called to the patient during the paroxysm, and early in the disease, my first object, particularly if he complained, as was generally the case, of much anxiety and oppression about the præcordia, constantly was, to empty the bowels by a brisk cathartic, such as formula, No. ix. This I have always found a most necessary measure.

sure. The stomach and bowels of most persons, who have been for any length of time in this country, are in a very debilitated state, and lodgements of hardened fæces are very apt to take place in the latter, affording a constant source of irritation to the whole system; and from the observations I have been able to make, I am very much inclined to think, that the milder and saline purgatives have not power sufficient to excite the intestines to an exertion sufficiently strong to throw them off. If the purgative was not quick in its operation, I ordered the assistance of glysters, and very generally found that a few stools gave infinite relief to the patient: they commonly relieved, in a great measure, the anxiety about the *præcordia*, and took away the nausea and vomiting, and by these means afforded great relief to the head, the pain of which, while the paroxysm lasts, is often very intense. During the whole of the disease, although purgatives have been so much decried, and certainly when given to such extent as to debilitate the

the patient, must be injurious ; yet I always found it most highly useful to keep the body open, and whenever there was the least appearance of costiveness, to remove it by means of laxative medicines.

In my early practice I gave a fair trial to emetics, but was soon induced to discontinue them : instead of relieving the vomiting and anxiety about the præcordia, they appeared to me to increase them ; and I found the vomiting so difficult to be allayed, that I dreaded exciting it by any means : they also certainly determined the blood to the head, to which in that country it is in general too much inclined.

During the interval I exhibited the Peruvian bark in as great quantities as the stomach would well bear ; but I found in general, if the disease was not in its very early state, that the stomach was either so irritable as to throw off the bark in substance, or otherwise so debilitated as to have scarce any action on it : it therefore
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collected in the intestines, forming balls, and was either passed in that state, or, remaining in them, occasioned all the unpleasant symptoms which follow the lodgement of hardened fæces. My usual plan, therefore, was, where I saw the powers of the stomach weakened, to give a cold infusion of the bark, to which I added a considerable quantity of the compound tincture, and of aromatic confection, as in No. v. This medicine I scarcely ever remember to have been thrown up, and by being better adapted to the weakened state of the stomach, its effects on the system appeared more evident ; and as the strength increased, I added, according to circumstances, more or less of the powder of bark. I may here bear testimony to the very superior efficacy of the yellow bark, which I have often seen put a termination to the disease, when the common cinchona has failed : it also seemed to sit easier on the stomach, a circumstance, in such an irritable state of it, much to be attended to.

At

At the approach of the paroxysms which follow, I always exhibited opium: the general dose to an adult was two grains, or a proportion of the tincture equal to it. This latter I either gave with the aqua ammoniæ acetatæ, or some other saline medicine: it generally had the effect of rendering the paroxysm less violent, and always shortened its duration. By those means it prevented, in some measure, the consequent great debility, and allowed a longer period for the exhibition of the bark. I have often also seen the paroxysm prevented in its formation by this medicine, given just as the patient felt the languor coming on.

Whenever any tumor appeared in the abdomen, or there was any fixed pain denoting the induration or obstruction of any of the viscera, I immediately ordered a large blister to be applied to the region of the part, and directed the dressings to be with the unguentum hydrargyri. By these means I have relieved a vast number of persons,

particularly in cases of enlarged spleens, which sometimes became of an enormous size.

The disease is often extremely obstinate; and while persons, who have been once attacked, and have not regained their strength, remain in the same place, they are continually liable to relapse; it is highly necessary, therefore, to send convalescents either to another island, or if that cannot be accomplished, to remove them to a more dry situation, and, where possible, to the windward of the marshes.

OF THE
REMITTING FEVER.

THE Remitting Fever, which is in general found in low marshy soils, or on those hills whose sides are generally invested with clouds, or in situations to the leeward of swamps, is most frequent during the rainy season, and the months immediately following : it attacks those principally who have been debilitated either by former sickness, by fatigue, or want of nourishment. The robust and healthy, and those who live generously, are by no means so subject to it, though frequently, the exciting causes are so powerful as to occasion it in persons who seemed the least predisposed to it. In
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the island of St. Lucia it raged with immense violence, both at the hill commonly known by the name of Morne Fortuné, and also in the low situation of Vieux Fort, in both of which places we had strong garrisons. Its mode of attack is as follows :—

The patient feels a sense of languor and uneasiness over his whole body: this is soon followed by *rigors*, which are sometimes severe, at others but slight: there is giddiness of the head, together with nausea, pain in the back and loins, and frequently in the legs and arms: the prostration of strength is very great, the eye is dull, and the countenance is pale and haggard. Soon after this, the skin becomes violently hot, the countenance full and suffused, the eye red; the dizziness of the head is now changed for a violent pain, which is often accompanied by delirium, but that more commonly occurs in the succeeding paroxysms. These are accompanied by great anxiety and restlessness: the respiration

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tion is sometimes very difficult; in almost every case it is so more or less: the pulse, which in the beginning was quick, and, before the hot fit was perfectly formed, usually small, now becomes full, and in general hard, continuing quick: the urine, before pale, now turns of a very high colour, the nausea is increased to vomiting, the matter brought up is principally bile, and that generally of a beautiful green colour, as though it were tinged with verdigrease. After these symptoms have continued some time, in general from six to twenty-four hours, seldom longer, the paroxysm is terminated by a sweat, sometimes profuse, but more frequently of a more moderate kind, though always, where it gives relief, universal. The pulse now comes nearer to its natural state, though in general quicker and smaller, and the patient complains of little more than a great languor, and a dull kind of head-ach.

The remission in general does not last for any time, though in some cases I have known

it continue for sixteen hours ; in general, however, in the course of five or six hours, the symptoms recur with increased violence : the patient becomes hot and restless, the head-ach and difficulty of respiration increase, the pulse becomes full, the face flushed, the skin generally dry, the vomiting returns, delirium comes on, the tongue, at first white, becomes brown and dry, the thirst very great, the stools are bilious, and often numerous ; there is much anxiety, frequently heartburn ; every thing is aggravated, and when remission again occurs, it is extremely slight, amounting to little more than a lessening of the head-ach, and absence of delirium, leaving the stomach in so irritable a state, that food, and most medicines, are rejected : the patient is in general able to retain wine, and some of the more cordial preparations of bark.

If the disease be very violent, or if the proper means have not been used for its mitigation, the third fit soon makes its appearance, with all the aggravated symp-

toms of the second: these continue for some hours, until the constitution, worn out by the violence of the fever, sink under it: the pulse diminishes in strength, but increases in quickness, the face becomes less red, and the eye puts on a glassy appearance; hickup and subfultus tendinum come on, the delirium is changed for coma, the stools and urine are passed involuntarily, and death quickly follows.

In many cases it happens, that where the face is much suffused, and the delirium violent, a very profuse hæmorrhage from the nose occurs. I have never seen it relieve the delirium, nor have I, in one case, observed a patient, with this symptom to any extent, ever recover. If it be by any means stopped, which is very difficult, the smallest motion of the patient renews it, the strength is quickly reduced, and death, in a few hours, is generally the consequence.

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The fever, as I have described it, was in its most acute form ; but it frequently happens, after the first paroxysm has passed, especially when the remission lasts for some time, if the practitioner be at hand to take advantage of the first moment of its appearance, and immediately to throw in the bark, that the second fit is impeded in its approach ; and when it does occur, the symptoms are much alleviated, though even then they are severe. The pain in the head and limbs is less, the pulse is more soft, the countenance is less flushed ; the delirium, which commonly occurs even in this favourable state, is of the milder kind : the patient is in general not violent, but chiefly recurs to those ideas which are connected with his former occupations, or pursuits. There is still much anxiety and wish for change of situation, together with thirst, generally some nausea, and a furred tongue. The symptoms, after a continuance of some hours, go off generally with a profuse perspiration, accompanied with a

disposition to sleep, which for the most part is but little disturbed. We may now in general assure ourselves of a longer and more perfect remission, in which time is given to throw in the bark in considerable quantity ; but this seldom terminates the disease so quickly as might be expected : it commonly continues for some time longer, at each paroxysm, approaching more nearly to an intermittent ; and this type it frequently puts on before its complete removal, though, from the observations I have been enabled to make, an Intermittent of this kind is not so obstinate, nor is it attended so frequently with visceral obstructions, as when it constitutes the original disease.

I have now described this fever in its milder, as well as in its most malignant form. The variations between the one and the other are numerous, and therefore the prospects of success must also vary. It naturally occurs, that where the delirium and anxiety are in a less degree, where the skin is more cool, the pulse more soft and
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moderate, and where the remission is most evident, there our hopes of a cure are best grounded.

There is one symptom attending this disease in almost every person, I mean the great dread they have of a return of the paroxysm, from the wonderful anxiety they feel during its presence.

This fever is, I think, the most apt of any to recur, though generally in a slighter form, and at uncertain periods. In this way, if change of air be not tried, the patient, after a number of attacks, is worn out, and at last appears to die rather from debility than from any immediate paroxysm.

The predisposing causes of remitting fever seem to be all of the debilitating kind, as we see it in general attack those who are naturally of a weak habit, or who, by fatigue, great excesses, or any other cause, have been reduced below the standard of

health; also those who have lived for any time in a warm moist atmosphere, such as has been described in a preceding chapter. On this account, we do not find persons who are very lately arrived from Europe, or who have been living in a tolerably dry atmosphere, so subject to it as those who have been some little time in the neighbourhood; nor do we find the inhabitants so free from this disease as from the ardent species: it is true, that when it does attack them, the inflammatory symptoms are not so violent, the case therefore by no means so urgent as in Europeans.

re versa } The exciting causes seem to me to be principally exposure to cold, particularly where the body has been relaxed by preceding heat: I have seen many cases where it seemed to have arisen almost solely from that circumstance. Officers and soldiers, who were in garrison at Fort Charlotte, on Morne Fortuné, were often obliged to go down to the Carenage, where the town of Castries

Castries formerly stood, and where a strong guard was placed. As a great mortality had happened among the horses and mules, almost every person was obliged to go on foot. The heat below the hill was very great, and the hill very steep; consequently, when persons who were heated in the bay, and still more so by the labour in ascending the hill, came near the top of it, which was by some degrees cooler, and where there was also generally a strong current of air, they were often enticed to stand still, and expose themselves to the wind, which certainly was for the time very pleasant, but soon shewed its ill effects; for often in a few hours afterwards, the persons were attacked with severe *rigors*, and all the other symptoms of the disease we have been describing. It often happens, also, that soldiers will find opportunities of obtaining bad rum, and when they find themselves intoxicated will sink away from notice to sleep it off, and by these means expose themselves on the damp ground,

ground, and often also to the night air; the consequence of this practice is very generally fatal.

In this disease, as in all others, it is very difficult to lay down a method of cure that shall suit all cases : we must often be guided by symptoms as they occur ; for it frequently happens in practice, that we are at times obliged to pursue a plan, which, from our theory of the disease, and from our general knowledge of it, we should blame exceedingly. Thus, though blood-letting be in general attended with disadvantage, and after the first remission I am confident that I have seen persons hurried to the grave by the use of the lancet, of which the French physicians in the West Indies are particularly fond, yet sometimes it has happened, that when I saw the patient in the first paroxysm, where the pain of the head has been very intense, the countenance turgid, and the pulse full ; where the difficulty of respiration has been great, and there has been a tendency to delirium ; particularly
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if I have known the person to be before of a full habit of body, who has lived well previous to the attack, and more especially if he has but lately removed into the marshy atmosphere, I have ordered ten or twelve ounces of blood to be immediately taken away, and the event has justified my conduct. The pain in the head, and difficulty of respiration, have been much alleviated: it has produced diaphoresis, and consequently brought on remission much earlier than from the violence of the symptoms I had any reason to expect; and I have to lament some few cases where my dread of phlebotomy has prevented my using it, and where the patients have died with profuse hæmorrhage from the nose: but I am still convinced that there is great danger in the use of the lancet, without the symptoms are particularly urgent, and the disease is at its commencement. Whether the lancet be made use of or not, early and brisk evacuations of the intestines are most essentially necessary. This I have always found most effectually performed by the
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more cathartic purgatives, together with calomel. My common prescription for an adult was the pills No. ix. I preferred this formula, as, from its small bulk, the medicine was not so liable to be returned from the stomach; and it not only evacuates the intestines, but by restoring their proper peristaltic motion, prevents the bile from being carried up to the stomach, which, I believe, after vomiting is once begun, is a very great excitement to its continuance. In all these cases, if the purgatives be not very speedy in their operation, they ought to be assisted by mild glysters, which certainly quicken their effects. If the pain in the head should not be lessened by these means, blisters ought to be applied, either to the head itself, or to the nape of the neck. They generally give very speedy relief, and check the tendency to delirium. The patient should also be kept as free as possible from the irritation of light and noise. If the fever do not remit soon after the evacuations, the saline febrifuge medicines may be given to advantage, particularly

ticularly in their effervescent state, when they are by far more grateful to the stomach, and assist considerably in diminishing the nausea and vomiting. If the body had been thoroughly evacuated, I frequently added, with success, a tolerably powerful opiate: this often procured sleep, from which the patient has waked much refreshed, and with considerable diminution of head-ach and delirium. In other cases, where the signs of debility have been greater, I have found camphor, with the confectio opiata, of very considerable benefit. Immediately as any remission came on, I constantly exhibited the bark in some form, commonly such as No. vi: this I gave in small doses, but quickly repeated, being fearful, by any considerable quantity of the bark, of exciting the stomach to throw it off, which frequently renders the patient unable to bear the taste of it afterwards. I observed this medicine, especially where the remission was not very distinct, to be attended with great advantage: it most generally determined to the skin, and induced diaphoresis, than

than which no symptom can be more favourable. As the remission became more perfect, and the stomach less irritable, I added a quantity of the powder of bark, with some aromatic confection, in such proportions, as, from the particular state of the patient, I conceived the stomach would bear pleasantly; nor did I ever desist from its exhibition during the succeeding paroxysms, unless the inflammatory symptoms ran very high: I had recourse to the bark, in that case also, the first moment I could venture on it.

I have seen antimonials often exhibited early in this fever, but I think with no good success: in doses sufficient to produce vomiting, they, in common with other emetics, did harm, as a discharge from the stomach by no means allayed the excitement, and, consequently, if brought up, they did no service; and if part of them were retained, the irritation on the stomach was increased.

Fomentations

Fomentations of the abdomen and warm flannels to the feet, during the paroxysm, were often of service; but I think frictions of the legs and thighs with rum or camphorated spirits of wine, were still more so, and often procured rest.

But our sheet anchor was the peruvian bark: if that remained on the stomach, we had good hopes of success; if not, debility came on so quickly, that little time was given for other medicines; the necessity, therefore, of a close attention to the moment of remission, as recommended in that very candid and judicious Treatise on the Diseases of the Army in Jamaica, by Dr. John Hunter, cannot be too strongly enforced, as, by those means, many may be saved, who, otherwise, must undoubtedly be lost.

The diet of patients for the few first hours, or during the paroxysm, can scarce be too light; lemonade, barley water, and diluting drinks of that kind are most pleasant

sant to the patients, and most proper for them. To those who could obtain oranges, I allowed them in as great quantities as they chose, without ever seeing any ill effects from their use. A beverage also made of tamarinds, syrup and water, was in general very grateful, and assisted in evacuating the intestines. During the remissions, I chiefly recommended well-made broth, either of chickens or mutton, or where those could not be had, of beef (but this last was in general so hard and dry as to afford very little nourishment;) also panada, boiled sago, or rice, with a little sugar and wine; in short, whatever would afford nourishment, without heating too much: and for this purpose I found nothing so effectual as good bottled porter, and, in general, nothing pleased the palate so well, or felt more grateful to the stomach, than this drink; it often took away the nausea, which is frequently left, even during the remission, and we could get this at times when we were much straitened for fresh food of any kind.

OF THE
ARDENT FEVER.

THE fever, which I have denominated ardent, most generally attacks the athletic, robust, and plethoric, more particularly those who have lately arrived from an European climate, or, who, by living much at sea, have not been debilitated by a tropical residence: it seldom attacks either the very old or the very young. Women also are far less subject to it than men; but this seems principally to arise from their living in a more temperate and sedentary manner; as the soldiers' wives, who exposed themselves to the rays of the sun; who drank great quantities of spirituous liquors, and at times endured great fatigue,

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were nearly as subject to it as their husbands, though I think the number, which survived its attack, was greater in proportion.

The following description is taken from my observations of a great number of persons who have suffered from this disease.

The Patient, who most generally has complained of no uneasiness, sometimes indeed of slight chilliness, but more frequently without any previous notice, is suddenly attacked with a violent pain in his head, back, and limbs, particularly the thighs, together with a wonderful prostration of strength, so as frequently to be unable to move, without aid, from the place where he first felt the attack: this is almost immediately succeeded by a violent nausea and vomiting; the eye is red; the countenance very much suffused and tumid, particularly about the fauces and throat; there is frequently some impediment in speaking; and to an inexperienced person, the whole
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appearance has very much that of a man in a state of intoxication; the skin is arid, and the heat so pungent, as to leave a very unpleasant sensation for some minutes on the hand of the practitioner. The pain in the head is very acute, and principally fixed over the orbit of each eye, though there is a sensation of weight over the whole head, which the patient generally finds some difficulty in lifting from the pillow. There is also an unwillingness to speak, as well as some impediment in speaking; these do not seem to arise merely from the confusion of the head, which renders the connection of ideas difficult, but partly also from a debility of the muscular parts of the organs of speech. When the patient does speak, it is generally in a thick manner, as if his tongue were too big for his mouth.

There is a fixed burning heat at the pit of the stomach, with wonderful anxiety and restlessness. The vomiting, which is almost continual, is of the most distressing kind. There is a total loss of appetite, and

a dislike to liquors, particularly to wine, cold water being in general the only fluid which the patient takes with readiness. In many acute cases, while the whole surface of the body is dry and parched, large drops of sweat may be seen hanging on the face, pressed out, as it were, by the intense pain; this I consider as one of the most unfavourable symptoms. The tongue is in general moist, and what may be termed morbidly clean, which, though difficult to be described, yet, when once seen, cannot be easily mistaken, or forgotten; it is generally more red than in health; there is little or no thirst; nor does the pulse vary materially, either in strength or quickness, from its natural state: sometimes in a few hours, but more frequently about the second day of the disease, delirium comes on, which is generally of the most fierce kind, so as frequently to require two or three persons to hold the patient in bed; the eyes, at this period, seem bursting from their sockets, and are commonly rolled about with great rapidity, and the whole

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countenance has a most fierce aspect. If either a hæmorrhage at this time burst from the nose, or, if the vomiting become black, it is nearly certain that the disease will terminate in death, which generally happens from the third to the fifth day.

It often occurs, that some little time before death the patient recovers his senses; the fever seems totally to subside; the suffusion of the countenance goes off; the eye is no longer red, but upon a narrow inspection there is a glassiness in it; the skin becomes moist and cool; and even the vomiting very frequently ceases, the pulse still retaining its fulness. In the first cases I saw, this appearance very much deceived me, as I believe it has most others, and I was very little prepared for the event. In a few hours the patient either fell into syncope, and quickly expired, or the vomiting and hickup returned, and death soon followed.

When the disease terminates in a favourable manner, it seems to be by a gradual abatement of the symptoms; the head-ach and delirium go off; the skin from being dry and parched, becomes more soft, and cool; the anxiety, burning heat of the stomach, and vomiting subside; a gentle universal sweat breaks out, leaving the patient extremely debilitated; the recovery of strength, however, is much more rapid than after any of the other diseases, though the head, in general, is affected for some time; the memory is a good deal impaired, and the mind is totally unable to remain fixed, for any time, to one particular object.

Where the fever attacks persons of a more delicate habit, the symptoms rather vary; though the pain in the head is great, the countenance is, in general, not so suffused, nor is there such very great dislike to light; there is often no delirium, or, if it do occur, it is late in the disease; neither the anxiety, restlessness, burning heat at the stomach, nor the vomiting, are by any means

means so urgent ; and the disease is much longer in running through its stages.

The matter vomited up seems to undergo a gradual change : it has no appearance of being bilious, as has been frequently asserted, but is merely at first the contents of the last meal, and, afterwards, phlegm and mucus, commonly streaked with blood, which last, I am rather inclined to think, is forced from the fauces in the effort of vomiting : as the fever continues, these become tinged with a brownish matter, at first appearing in streaks, but in a few hours, the whole which is vomited is a blackish fluid, resembling, in its appearance, the sediment of coffee ; this is thrown up in immense quantities, and when thus formed, without any nausea, or difficulty, seeming to offend the stomach, not by its quality, but by its quantity, as, after it is thrown off, which appears to be by a very slight effort, the stomach remains perfectly easy, till so much is again collected as to distend the stomach, when it is ejected as before.

The matter thus brought up has no smell, and those patients, who were sensible at the time, spoke of it, on enquiry, as having no taste. This was, except hæmorrhage, the most fatal symptom in the disease, and very few indeed recovered after this was fully formed: there have been instances, but they are extremely rare. It also often happened, that the same kind of fluid ran off in great quantities from the intestines during the few last hours of the patient's life.

Hiccup is a very frequent, though not a constant symptom: it is sometimes very troublesome, quite lifting the patient from the bed. Where it is violent, the prognosis must certainly be unfavourable, though I have seen persons recover, in whom this symptom has been very urgent.

A Diarrhœa is very often an early attendant, but although evacuants are so extremely beneficial, yet I have not observed a spontaneous determination to the bowels to be by any means a favourable symptom;

symptom; my experience would rather lead me to a contrary conclusion.

The urine, through the whole of the fever, is much more high-coloured than that of persons in health, even in that country, and, when the patient begins to recover, it becomes turbid, thick, and almost of a chocolate colour, emitting a most foetid odour.

The yellowness of the skin, which very generally accompanies this fever, sometimes appears in a few hours, but more frequently on the second or beginning of the third day. It first appears in the white of the eye, then on the neck and shoulders, and very quickly spreads over the whole body. It does not appear to have any effect on the disease. I have seen many die with all the different degrees of this colour, and some also before the yellowness came on, and I have also seen as many in proportion recover, who were of a deep orange, as those who were but slightly tinged.

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I had frequent opportunities of examining the bodies, soon after death, with other medical gentlemen.

On laying open the abdomen, we could not perceive any particular smell, neither were the parts particularly soft, nor was there any other appearance that could lead us to an idea of a putrescent state of the body.

The liver was generally found, though commonly rather paler than usual, and sometimes there was a slight appearance of inflammation on its concave surface. The gall bladder was sometimes totally empty, at others, it contained a small quantity of bile, not in the least altered from its healthy appearance. There was also the same yellow tinge, at the opening of the ductus communis choledochus into the duodenum, as is to be seen in Persons dying of other diseases. The stomach was commonly in a sound state, at other times it bore some slight marks of inflammation, but not at
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all more than may naturally be supposed to have arisen from such violent and repeated exertions; the whole of its internal coat was covered with mucus, as in its healthy state, neither was there any appearance of blood oozing into it, nor, after the stomach had been emptied of the same kind of matter as was vomited up a little before death, of which there is generally a great quantity, and the parts had been carefully wiped with a sponge, could we discover any appearances either of ruptured or dilated blood-vessels.

The intestines contained great quantities of the black matter, but, together with the other abdominal viscera, appeared to be in a sound state, as did also those of the thorax, though in the pericardium, and also sometimes in the cavity of the thorax, there appeared a much greater quantity of serum than naturally, and where the yellowness had appeared on the body, this water was very generally tinged with the same colour. There were commonly marks of inflammation on the dura and pia mater, and the
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ventricles contained a quantity of water. I think this effusion into the cavities may, in some measure, lead us to account for the short remission of symptoms, which frequently occurs a little before death, and also for the syncope that often follows this remission, and suddenly carries off the patient; particularly when we contrast it with the beneficial effects of an early determination to the skin.

The black fluid, found in the stomach and intestines after death, was equally inodorous with that vomited up while the patient was living. I had neither time nor materials for any particular analysis of it, and having by some accident lost the paper, containing notes of a few very crude experiments made on it, by another gentleman and myself, I can only speak from memory.

Neither of the alkalies produced any change on it, nor did the nitrous or muriatic acid, expressed lime juice, or distilled vinegar.

gar. The vitriolic acid, to the best of my remembrance, extricated a large quantity of gas, and rendered the fluid more thin, and changed its colour to a reddish brown.

On distillation, a quantity of water, and afterwards phlegm, both nearly or quite inodorous, came over; the matter remaining in the retort, when dried, was very slightly inflammable, and decrepitated with great force, giving out a smell similar to any other animal matter when burning.

A small quantity of the fluid was kept for some time in two phials; on uncorking the one a foetid smell, resembling that of rotten eggs, was given out, and the fluid appeared thinner, and of a reddish tinge; that which remained in the corked phial did not undergo any change for many months.

The causes seem to be exposure to the heat of the sun, particularly if the lower extremities be at the same time immersed
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in cold water, which often happens to soldiers in crossing rivers, &c. Great exercise, more especially after the person has been living a sedentary life. Great excess in spirituous liquors, particularly new rum. Change of situation from the cooler hills to the hot, dry, and sandy bays.

Of the Cure of the Ardent Fever.

THIS fever is so violent in its attack, so rapid in its progress, and generally so fatal in its termination, as to require the most expeditious and decisive exertions for its removal; and I know no disease to which that sound adage “*Venienti occurrere morbo*” can be more properly applied. The plan I am about to lay down is one which I observed to be attended with better success than any other, and I was by my own experience so well convinced of its superior efficacy, that I carried it to, perhaps, a greater length than most other
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practitioners; and since I followed this method of cure, I lost by far fewer patients, in proportion to the number attacked, than I had lost before.

If the patient be seen soon after the attack, blood-letting ought to be the first thing. I have never seen any ill effect from taking at least sixteen ounces from an adult: where the countenance was tumid and suffused; the eye red, and the pain of the head intense: together with great vomiting, anxiety, and burning at the pit of the stomach, particularly if the skin be hot and parched; if the patient be very plethoric, or of a particularly robust make, the quantity could be increased with advantage to twenty ounces, or even more. It was necessary that the orifice from which it was taken should be large, and that the whole should be taken away at once, so that the full effect might be produced. I have always observed smaller bleedings, repeated at short intervals, to be injurious; the violence of the inflammatory symptoms
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was not mitigated, and the patient in a short time had to combat, not only with the debility produced by the great excitement of the fever, but also with that brought on by the loss of blood ; but where the blood was taken away in sufficient quantity, a diaphoresis, together with relief of the head and stomach, were almost always the consequence. In fact, I never found any thing so powerful in alleviating the vomiting as blood-letting. The longer venæsection was delayed, the less did it appear to have any power in relieving the disease.

Immediately after the blood had been taken away, it was my general practice to order a brisk cathartic, as the pills No. ix ; and, if they were not very quick in taking effect, I ordered the assistance of glysters. I know no disease which bears such copious evacuations with so little debility as this does ; indeed, the prostration of strength is very much relieved by the early use of blood-letting and cathartics : but if this evacuating plan be not very briskly followed up, the
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restlessness, anxiety, and head-ach become more violent, and the skin grows more hot and dry; after this is the case, a second mitigation of symptoms is very difficult to be obtained. In general, if the blood-letting and the exhibition of the cathartic had taken place in the morning, I ordered an enema the last thing at night, even though the stools might continue to be numerous; and, the following morning, as we had now reason to suppose the bowels nearly freed from any indurated fæces, or other irritating matter, and, if the stomach were at all in a condition to bear it, instead of any more cathartic medicine, I continued to purge the body with some of the neutral salts. One of the most easily prepared, and equally efficacious, was the purgative mixture No. vii; four ounces of which were to be taken early in the morning, and the same quantity six hours afterwards; this I ordered, except the fever was quite conquered, to be repeated, in the same manner, on the following day. By this method, I had most frequently the happiness to see

the patient, on the third day, become less confused in his head; the vomiting, heat, and restlessness, which had been relieved by the blood-letting, were now nearly, if not totally removed; the skin became more cool, and the moisture on it greater, more regular, and more universal; the tumour about the throat and fauces subsided; the suffusion of the countenance, and redness of the eye, went off; nor did the patient complain of weakness in any proportion to that left by a longer continuance of the fever: after this, I desisted from the purgative plan, taking care however to keep the body moderately open, and left the rest to nourishing diet. Sometimes I have given the infusion of snake-root, and other mildly cordial medicines; but more frequently, on account of the irritable state of the stomach, I have not ventured to exhibit any medicine whatever, nor have I seen the least ill accrue to the convalescents from that practice.

Blisters were, in general, attended with the best effects, and that early in the disease,

either applied to the head, the neck, or where there was great burning heat about the stomach, to the scrobiculus cordis: they ought to be large, as the inconvenience, which the patient feels, is very little greater, and the benefits arising from them seemed to be much more evident.

Warm fomentations also to the abdomen were very useful in relieving the uneasiness of the stomach, also frictions of the legs and thighs were often attended with very good effect.

The above plan I have found by far the most successful, varying it, however, as the symptoms and habit of the patient seemed to point out. This I believe myself perfectly correct in saying, that, in this fever, I never saw any case where the purgative plan, to its fullest extent, ever did harm, nor did I ever see any ill effect from copious blood-letting, when performed early in the disease, while the vomiting and burning heat of the stomach, together with

the suffusion and tumour of the countenance remained.

I have tried opium, in many cases, and in its different forms, but by no means with good success; it in general impeded the effect of the purgatives, and, instead of rendering the patient more quiet, and lessening the delirium, it increased both the anxiety and the determination to the head.

I have seen antimonials used frequently, but by no means with good effect, the slightest dose being liable to excite vomiting, the most dreadful of all the symptoms and the most difficult to be allayed; for this reason, emetics of any kind must be most highly objectionable.

I have tried bark, in a great variety of forms, but never with any advantage; and I am very confident, that I have, even in the latter stage of this disease, when nothing but debility was apparent, very often seen

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its exhibition attended with increased heat, and dryness of the skin, and a return of anxiety and head-ach, which, by desisting from the bark, have again been removed.

Calomel has also been exhibited in surprising doses by several practitioners: early in the disease, as a purgative, particularly when combined with some of the drastic cathartics, it has very great merit, but afterwards, I cannot say, that those cases, which fell under my observation, seemed to be benefited in any particular manner by its exhibition.

Wine, in the early stage of this fever, I consider as a poison; happily, its taste is so disgusting to the patient, that he is with very great difficulty persuaded to swallow it. In the weakened state, after the fever has perfectly subsided, wine certainly is very beneficial in recruiting the strength of the patient,

but even in that case, it should be exhibited with caution, as every thing too stimulant is apt to act forcibly on the weakened constitution, and produce very troublesome feverish symptoms.

There is very little to be said, as to diet, early in this fever, for it was but seldom that a patient could be prevailed on to take any food, even of the lightest kind, though ever so much urged to it by the attendants, who are frequently foolishly eager in pressing it, nor will they take any drink, except cold water, with the smallest degree of satisfaction; in this craving I indulged them, and I think with much advantage. In the latter part, when little remained but debility, light nourishing diet, and wine, or, what is much better, good bottled porter, are of much service. It may here be necessary to observe, that the convalescent should be extremely cautious when his appetite returns, as it often does with redoubled force, how he overloads the stomach,

stomach, which being unable to digest such a quantity of food, the whole system is excited, and fevers are generated, which always delay the recovery, and not unfrequently prove fatal.

OF THE
MALIGNANT OR GAOL FEVER.

THE malignant, gaol, or spotted fever differed but little from the same disease as it is seen in the warmer seasons of the year in this country : this has been so well described by several authors, that I should have spared my reader the trouble of attending to any account I can give, had not some description of its symptoms been necessary to distinguish more pointedly those leading and characteristic features of each fever, to be particularly dwelt on in the succeeding chapter, which treats of the diagnosis of those fevers.

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This fever seemed very little peculiar to persons of any age, sex, or temperament, but, being the produce of contagion, was liable, nearly alike, to seize the strong and the weak. There are some persons, and those to all appearance of perfectly different constitutions, who seem to be endowed with some peculiar repulsive power with regard to particular contagions; we see this frequently in the small pox, measles, &c. and it is no where more strongly shewn than with regard to this fever.

As it attacked persons of different habits and ages, the appearances, particularly in the early stages, varied considerably; I shall therefore shortly describe the symptoms as they generally appeared, leaving the varieties to be spoken of at the end of the history.

Persons when first attacked generally complained of a degree of nausea, some pain in the head and back, and often wandering pains also over the limbs, together with very
great

great dejection of spirits, languor, and total loss of appetite, slight transient chills come on at uncertain periods, followed by flushes equally transitory; the tongue is whitish, and there is frequently a very unpleasant taste in the mouth, and about the fauces; the pulse, at this period, is rather quicker and weaker than usual. The patient often continues moping about in this manner for some hours, being neither sick nor well; this continues sometimes for a longer, sometimes a shorter period: after this, the chills become more strong, and are followed by a greater degree of heat, not transient, as before, but continual: the pain in the back and limbs increases considerably, as does the nausea, which often induces vomiting; there is much thirst; the pain of the head is now very intense, and is much increased by the irritation of light and noise; the countenance becomes suffused, and the eye red, fiery, and glassy, but there is little particular fulness either of the countenance or eye; the pulse at the wrist is full and very quick, but seldom hard;

hard; there is commonly much oppression about the præcordia, attended with a sighing respiration; the tongue soon becomes very foul, and dry; the pulsation of the carotids is very evident, and slight delirium comes on very early; this is generally accompanied with much watchfulness, for though, as the disease advances, the patient lies in a stupid state, yet when approached, it may easily be discerned that he is awake, and on being roused, any enquiries as to sleep are always answered in the negative. The sick very frequently continue in this state for some days, gradually losing the extreme irritability as to light and noise, until as the debility increases the pulse becomes weaker, very quick, and irregular, sometimes fluttering, then for a little time regular, and again fluttering, and unequal; the tongue becomes black and parched, and to appearance swelled; the breathing thick and short; the patient is continually picking the bed clothes; the extremities, particularly the feet, are now constantly cold; the stupor degenerates into coma, which
becomes

becomes more and more profound; the pulse still more weak and intermitting; the fæces and urine are discharged involuntarily; subfultus tendinum and hickup now come on, or increase, as does the difficulty of respiration, attended with stertor; and convulsions soon snap the tender thread which remains.

In general from the earliest attack the spirits suffer very materially. The dread of death seems very early to have taken strong possession, and, I am convinced, adds very greatly to the danger of the disease: the voice very strongly indicates it, for, though the patients seem to have no difficulty in uttering their words, yet they always speak in a whining plaintive tone, which does not always depend entirely on the debilitated state of the body, for in many cases, after I had been some little time with the patient, and had given him encouragement, and by those means turned the mind from the contemplation of danger, I found that the voice gradually assumed

assumed a more firm and chearful tone, and the pulse grew much more calm than at my entrance.

The pain in the head is generally of the throbbing kind, not fixed particularly in one part, but as many of the sufferers described it to me, it conveyed the sensation as if the head was opening and shutting: this was always very much increased both by light and noise. I have often observed, that the admission of too much light has kept up both the watchfulness and delirium, and that on the chambers being in some measure darkened, the patient has fallen asleep, and on waking has not only found himself free from delirium, but the pain of his head also very much abated.

The eyes in the first stage are generally very red and fiery, with the pupil much contracted, the tears commonly flowing down the cheeks. As the disease advances, they become dull and glassy, with the pupil generally dilated; and, during the latter
I stage,

stage, they seem nearly senseless of any irritation from ever so strong light.

The tongue from the beginning is generally white, and very soon becomes much furred: it commonly trembles very much, on being put out. As the fever increases, it becomes brown, with a blackish mark on the tip and down the middle; this blackishness is soon continued over the whole tongue, which, at the height of the fever, is commonly stiff and cracked. The whole of the mouth also is covered with black and loose saburræ.

The skin, though hot, is seldom or never parched. There are generally through the whole of this fever partial sweats, particularly about the head and breast, while frequently at the same time the extremities are cold: this is by no means a favourable symptom; neither are the profuse colliquative cold sweats, which also frequently occur, and weaken the patient, without alleviating the disease.

It

It is very general also that eruptions make their appearance (particularly that little red rash, which, in the West Indies, goes by the name of prickly heat), and are in general very troublesome to the patient; but I cannot say I ever saw any good effects from their appearance. I have also observed, that, by the admission of cooler air, or the application of cold water, they disappeared, but I never found any of the symptoms by those means at all aggravated.

Small angry pimples often broke out about the nose and mouth; these I always found to prove a favourable symptom: the more inflamed and spreading, the more convinced was I of the recovery of the patient: they seldom appeared till late in the disease.

In some few cases, I had opportunities of seeing the fever terminated by suppurations of the glands, particularly the parotid: these were always a long time in suppurating; and the discharges of matter were so
great,

great, that the patients, weakened by the previous fever, sunk under them; nor with all the assistance I could give, by nourishing food, by wine, porter, and tonic medicines, have I found one who survived, although their existence was spun out sometimes for a length of time.

The pulse in the early stages differs very materially; in some strong habits it is hard: in almost all it is full, but, generally speaking, at the same time soft. It very early becomes very quick, and soon after small, and, as the debility increases, fluttering and weak, or otherwise so excessively small and quick, as to be counted with difficulty. The more fluttering and irregular, there certainly was the greater danger.

The respiration is in general very particular: it is always accompanied with sighing or sobbing, being quick and partial for some seconds, and then an exertion of the whole pulmonary system seems to come on, and,
after

after that, for a few seconds, the breathing is small and quick. As the disease continues, it becomes laborious, and, latterly, in some measure, convulsive. The breath, through the whole fever, is generally very offensive.

The nausea is commonly very troublesome in the beginning, but is generally relieved, after the stomach has evacuated itself a few times; the vomiting is by no means incessant, nor does it generally continue after the first day or two. The matter thrown up is sometimes bilious, but more frequently nothing more than phlegm and mucus. It sometimes returns at different periods, particularly if the bowels be not kept open. In some cases also it will return at the latter stage of the disease, but this is by no means a common symptom, where it does, the case generally terminates fatally.

Diarrhœa is a very common and a very troublesome symptom, during the whole
G course

course of this fever, frequently attended with very painful gripings and flatulencies: the stools are often bilious; at other times, blackish fluid fæces are passed, extremely foetid; and often, during the last stages, they run from the patient without his will or knowledge, emitting a most cadaverous stench.

The delirium is generally of the milder kind; the patient almost constantly muttering to himself incoherently; but when thoroughly roused, seems to recollect himself, and give a rational answer: then in a few seconds again sinks into the same torpid state: this is frequently so quick, that when he has, by desire, put out his tongue, he forgets often to take it in again till reminded.

Towards the latter part of this fever, hæmorrhages were very frequent, not only from the nose, but also from the gums, the corners of the eyes, and from the ears; also from the extremities of the fingers and the toes.

toes. I perfectly recollect two cases where the patients actually expired from the loss of blood from under the nails of the toes.

In some cases also I have seen considerable erysipelatous inflammations in the throat, attended with ulcers. Aphthæ are very frequent: they come on rather early in the disease, and often appear to extend themselves through the whole of the primæ viæ, occasioning gripings and diarrhœa, and adding considerably, not only to the uneasiness, but also to the danger of the patient.

This fever is in general found in crowded places, such as ships, particularly transport ships, or full-laden merchantmen, gaols, &c. Although I have seen it rage with very great violence in one foreign regiment which was out with us and from several reasons suffered severely, yet I do not think it nearly so prevalent in the West Indies, as it is in our more northern climates: this I attribute chiefly to their mode of building; which permits the fresh air to pass through

the whole of their houses; from which cause also it has the appearance of being less contagious. I have seen many cases from on board the transport vessels, where there was not the least doubt that they had arisen from contagion, brought into the military hospitals at the town of St. Pierre's, in the island of Martinique; but, from the very great attention to cleanliness and the free circulation of air, I never saw an instance where the medical gentlemen, the attendants, or any of the patients, received the infection.

The causes are obviously certain effluvia arising from a number of persons pent up together, without a free circulation of air, as must sometimes occur in gaols, ships, hospitals, &c.; in the latter, the stench, arising from large ulcers, contributes not a little to the unhealthiness: effluvia also from stagnant water, putrid vegetable or animal matter, have some power in producing it. But, as far as I have been able to judge, I should be led to imagine, that the effluvia
arising

arising from living bodies, are much more liable to infect persons, than those from the dead; and I should also be inclined to say, that the bodies of those who have died of the disease, are, by no means, so apt to spread the contagion, as during the time life still remained.

It is very necessary that this fever, as well as most other diseases occurring in those warm climates, should be very early attended to, as, otherwise, the debility is so great, and so quickly induced, as often to baffle all our exertions, and to carry the patient off in a very small space of time.

If I found any person moping about with some degree of head-ach, nausea, and slight rigors, particularly where there was any reason to suppose that he had been subjected to the influence of contagion, the first step was to empty the stomach with a few grains of ipecacuanha; or, if the vomiting had already commenced, to assist the stomach to evacuate itself by means of a little

warm water, seemed to have an effect equally beneficial: by this I have often seen persons relieved, who had every appearance of incipient typhus; the nausea and head-ach have been removed, the rigors and transient heats relieved, a slight universal sweat has been induced, and the patient felt no more of the fever; but this occurred only where the disease has been attacked in the few first hours, for, after it was fully formed, I never saw it cut short by any means whatever: we had therefore nothing in our power to perform, but, as far as possible to remove any irritation, and, by those means, to render the febrile symptoms more mild, consequently, the ensuing debility not so great, and when the stage of debility arrived, to use every attention, both by nourishment and medicine, to support the patient.

The first thing I attempted, after the stomach had been properly evacuated either by its own efforts, or by the assistance of an emetic, was to open the intestines, so that
they

they might be cleared of any hardened or putrid fæces; this I constantly found best performed by a brisk purgative, such as No. x; and, I must here observe, that in the typhus, both as I have met with it in the warm climate of the West Indies, and as I have seen it in London and other places in England, I have constantly marked, contrary to the opinion of the justly celebrated Dr. Huxham, that the milder purgatives, which he so strongly recommends, such as manna, the neutral salts, rhubarb, &c. are by no means sufficiently powerful to remove the whole of the offending matter, and that the gripings and anxiety still continued; while, on the contrary, two or three copious evacuations by rhubarb, quickened with calomel, most commonly not only took away the irritation occasioned by the fæces, and the very troublesome diarrhœa consequent thereon, but also, instead of weakening the patient, seemed in some measure to remove the very great prostration of strength which had previously been so much complained of. I always found it necessary to keep the bowels

gently open, during the whole of this fever: this was certainly much the most conveniently done by means of small doses of the neutral saline purgatives, by manna, or a few grains of rhubarb, to which last, when there was any heartburn, as was frequently the case, a little magnesia was added with very great advantage. If there were any degree of anxiety about the præcordia, or any hardness or uneasiness about the region of the liver, I commonly added two or three grains of calomel to seven or eight of rhubarb, so as to procure a free evacuation or two; and this commonly with much benefit to the patient. I most freely allow, that evacuations to any great extent, after the bowels have been once cleansed, or when the disease is advanced in its progress, are most completely dangerous; and I have seen several cases, where an imprudent use of purgatives has induced so great a debility, as never after to be overcome by the most powerful cordials, and the patients certainly were hurried out of life; but there is no medicine sufficiently powerful to do
much

much good, that may not, by falling into unskilful hands, be also at times liable to do much mischief.

After the bowels had been thoroughly evacuated, my next endeavour was, if possible, to procure a gentle diaphoresis by such means as were not likely to increase the fever, should they fail to have the desired effect on the skin. The danger of an attempt to promote perspiration by means either of a quantity of warm clothing, or the use of heating cordial medicines, has been of late so sufficiently pointed out, and the practice so much exploded, that it would be useless for me to dwell on it: but it may be proper here to mention, that the exposure to a cooler atmosphere will often of itself induce perspiration; this I have frequently observed in the West Indies, particularly on board merchant-ships, where I have found patients burning with heat between decks, who, almost as soon as they were brought up, and admitted to the cooler fresh air, have been covered with a gentle, universal

universal perspiration, commonly followed with refreshing sleep.

The medicines which seemed to answer best as diaphoretics were the aqua ammoniæ acetatæ, together with an infusion of serpentaria, as in No. viii; camphor with nitre, either in powder, as No. xi, or combined with small quantities of the confectio opiata, as in No. vi. I have found this latter preparation frequently open the skin, and procure sleep, when much larger doses of opium in any other form have failed. The compound powder of ipecacuanha was also frequently successful. It may be necessary to observe, that opiates of any kind must be highly objectionable before the bowels are thoroughly cleansed; indeed all diaphoretic medicines appear to me at least useless before that great object be attained; for I do not remember ever to have seen a perspiration either regular or at all conducive to the relief of the patient, while any irritating matter remained in the intestines.

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I have always been fearful of administering antimony, from a dread of increasing the debility ; and I cannot say, that the success of those who were more partial to it than I was, and whose practice I had an opportunity of observing, at all altered my opinion.

Perhaps in the class of diaphoretics in this disease, and I think in several others, there cannot be one more to be depended on than cold water. This the patients very frequently requested, and I always indulged them with it. I have frequently been baffled in every attempt to obtain, by means of diaphoretic medicines, any degree of regular perspiration, when a draught of cold water has succeeded in a few minutes after it has been taken.

It must always be greatly the wish of the practitioner to obtain this object, for I do not recollect that the febrile symptoms ever abated until a free and regular perspiration took place. There was constantly a degree
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of restlessness, anxiety and confusion, pervading the whole system, until it was taken off by the appearance of a regular diaphoresis.

I have dwelt thus particularly on the regularity of the perspiration in contradistinction to those partial sweats which are frequently very profuse on one part of the body, while others are totally free from them: these debilitate the patient very much without bringing him the least relief; nay, where they are at all encouraged, either by warm bed-clothing, or by a close room, they are frequently so profuse, that persons may be literally said to melt away in their own sweat: where these were violent, they were always attended with that uncomfortable rash called the prickly heat, increasing the irritation of the system to a very great degree, and, by those means, tending vastly to continue the watchfulness. While, on the contrary, a regular perspiration is universal, generally not profuse, but giving the skin a peculiarly soft relaxed feel: the
skin

skin becomes moderately warm, and of the same temperature over the whole body; whereas in the partial sweats, the body may be sweating and burning in one part, while others, particularly the lower extremities, shall be cold and dry, and, in a little time, those parts, which before were burning, may become cold, while big drops of perspiration hang on them. The one is constantly attended, or very quickly succeeded, by a mitigation of symptoms; the other never.

It is particularly requisite, in the early stage, to avoid the excitement both of light and noise, to the impressions of which the patient is generally most exquisitely sensible; the head-ach and watchfulness are very much increased by them, and the whole system is thereby kept in its restless state. As the disease advances, this irritability commonly goes off, leaving such a degree of debility of the parts, as renders them by far less sensible than in health, consequently after that is the case, less caution in these points is necessary.

After

After the bowels have been thoroughly evacuated, if the sudorific medicines do not appear to have much effect, and the patient be intensely watchful, as is very frequently the case, I have often found a full dose of opium to be attended with very great benefit; sleep has been often procured, and the patient has after some hours waked much refreshed, and during the time he slept has been covered with an universal moisture, nor did I perceive that when delirium has commenced the opium had any effect in increasing it. On the contrary, I have often seen patients tossing in their beds, rambling in their discourse, with the appearance of intense head-ach, and a red watery eye, who, by taking a couple of grains of opium, or a proportional quantity of the *tinctura opii*, have been thrown into a sound sleep, which has lasted for some hours, when they have waked refreshed, their minds calm, and the head-ach diminished; the sleep seeming to have benefited them as much as if it had not been procured by means of opium. In this, as well

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as in all other fevers where opiates are proper, I confess myself very partial to their exhibition in such doses as may give their full effect at once: in smaller quantities they seem to irritate the system to a much greater degree, and, as they must be frequently repeated, to debilitate much more, while the benefit derived from them is commonly weak and inconclusive.

As the disease advances, and the strength of the pulse diminishes, which it generally does rather early, it is necessary, even though the skin should continue hot, and the head-ach and flushing of the countenance remain, to have recourse to the cortex peruvianus. I have generally found, in the early stage of the fever, where debility has been very great, that a mixture of the serpentaria infusion and the aqua ammoniæ acetatæ was by no means rendered less diaphoretic by the addition of a little compound tincture of bark, which was my general plan; and, as the debility increased, I exchanged the aqua ammoniæ acetatæ for an equal quantity of
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the infusion of bark, still retaining the serpentaria infusion, until a regular moisture of the skin, and consequent calmness of the pulse had taken place, which always, as Huxham has very justly remarked, occurs in some part of the fever, if the disease terminate favourably.

It is very frequent that comatose symptoms occur, and those commonly attended with spasmodic affections of different parts of the body. In these cases, I have often found musk, added to the camphor bolus, to be of great service, continuing at the same time the use of the Peruvian bark.

Blisters I think ought not to be too early employed; they bring on more irritation than can be well borne, but as soon as the symptoms of irritability cease, they then are attended with great benefit, both applied to the head and neck, also on the arms and thighs. In general their effects appear to me to be transitory, so that no permanent
good

good can be expected but from a succession of them.

In cases of great debility, I have very often found great advantage from the use of the shower-bath, or, which I used more frequently, laying the patient down and throwing a few buckets full of cold water on him, and then covering him up tolerably warm, taking great care not to overload him with cloaths. It very often produces a more regular circulation, the extremities become warm, and, consequently, the head and præcordia relieved in some measure from their burthen, refreshing sleep is very often induced, and perspiration promoted. I have often ordered this to be performed when the patient was nearly covered with the prickly heat, and never found any ill effects from its use, although the eruption has for some time totally disappeared. I have frequently prescribed it where petechiæ had appeared; under those circumstances I had no dread of its ill effects, which I confess was not the case

at first with regard to the prickly heat, although I had often seen it checked by the admission of cold air, without any disadvantage, yet I still had some anxiety on that head, till experience thoroughly convinced me that my fears were groundless.

In cases of hemorrhagy, or any other circumstances that could lead me to imagine there was much tendency to putridity existing, I ordered the acid of vitriol added to the bark, in such doses as the bowels could easily bear, making use at the same time of the common drinks, highly acidulated with lime juice. In many cases this plan was effectual; but where the hemorrhagies arose to any great degree, they were generally fatal. In some few instances I have seen much benefit arise from small and repeated doses of the *lincum vitriolatum*; at others, I have observed small doses of alum of service; but the generality of cases which were not relieved by the former medicines, withstood every effort I could make with the latter: yet, as they have sometimes
succeeded,

succeeded, it is but just we should try a doubtful medicine, rather than leave the patient to that fate which we know otherwise awaits him.

I have never found that placing plugs of lint, dipt in astringent liquors, up the nose, or applying them to any part from which the hemorrhage proceeded, was at all beneficial. The whole system being diseased, we only, by preventing the flow of blood from one part, induced it to break out in another, and by those means often gave much uneasiness to the patient, without any probability of benefit.

In the erysipelatous inflammation, about the fauces and throat there were often deep dull-coloured ulcers formed; for the removal of these I never could find any better medicine than an infusion of pepper pods, particularly of that species which goes by the name of bird pepper, in strong vinegar, suffering the patient to rinse his mouth and throat with it frequently: they often com-

plain of considerable pain in first using it, but this soon goes off, and the relief occasioned by it is such, that, where the senses remain, they have very little dislike to repeat the application. In some cases it is necessary that the attendants should, with a bit of rag or a sponge placed on a small stick, and dipped in the vinegar, touch the parts. This may often be conveniently done, while the patient lies with his mouth open, in the stupid state which often attends this disease.

During the whole fever, it is necessary to attend very particularly to the patient's diet. For some time, little can be taken but diluting and subacid drinks; but when the debility comes on, then it is most highly necessary that nourishment should be taken; for though the patient seldom enquires for any thing of the kind, it seems to be chiefly from a kind of apathy, pervading the system; since on its being offered, it is seldom refused, except from the idea of trouble to be occasioned by

by taking it. The stomach seldom seems to loath, very rarely rejects it, and most commonly feels more comfortable after its reception. The most proper drinks at this time are claret, port wine mixed with a small quantity of water and acidulated with lime juice, good clear porter, particularly where it is bottled. We had much excellent porter sent out for the use of the soldiers, but this was apt to turn sour. When we could get it perfectly sound, I am convinced it was of vast benefit to the sick. Spruce beer also I found very beneficial.

The chief eatables proper were soup, panada, boiled rice, and sago with sugar and wine. It is necessary these should be exhibited very frequently; indeed, without attendants, who will be very exact and industrious in seeking opportunities to give both medicines and nourishment, little benefit can be expected from the most skillful practitioner.

OF THE
DIAGNOSTIC SYMPTOMS
OF THE
F E V E R S.

IT may assist the reader if we bring together what has been scattered in the former chapters concerning the different situations, seasons of the year, and predispositions, which conduce to the production of the various fevers.

We may observe that the ardent fever requires a certain degree of firmness of fibre: it reigns most commonly at that period of the year when the sky is clear; when the atmosphere seems little, if at all, loaded with vapour, and when the heat is
great.

great. The objects of its attack are the stout and athletic, young or middle aged men, or women who in their constitutions and habits nearly resemble them, and those who have lately arrived either from Europe or North America, or from the more mountainous situations in the West Indies themselves. It is prevalent in the dry sandy bays, and is often induced by persons who have been much heated being suddenly exposed to cold.

The remitting fever, on the contrary, seems to require a previously debilitated body: it is most frequent at those periods of the year, when, the ground having been supersaturated by the rains, the whole atmosphere becomes loaded with noxious vapour. Persons who have lived for some time in the West Indies are by no means freed from its power, and women and children suffer severely from it, as do also those who have been debilitated by previous illness or long continued fatigue. It delights in the low swampy marshes, in

the neighbourhood of lagoons, in uncultivated situations, where the currents of air are impeded, and on the smaller hills which are subject alternately to the swampy vapours, and the cold storms.

The gaol fever is seldom to be met with except on board of ships or in crowded towns, or in individuals who have been exposed to the contagion of such places.

This recapitulation may lead us to a very important point of practice; it may teach us to be very minute in our enquiries into the former manner of living of our patient, and also into his previous residence and other circumstances: for it must appear to be the height of imprudence to bleed a man profusely, and to have recourse to other violent evacuations to a very great extent, though he should be young in appearance, robust, and attacked in a dry hot situation, when we might find, by a more minute inquiry, that this man has, for weeks previous to his illness, been undergoing immense

menſe fatigue, in ſituations too the moſt expoſed to ſwampy vapours, and perhaps with but ſpare diet and little ſleep. Nor is this ſuppoſing a caſe merely for the ſake of illuſtration; the thing itſelf is continually occurring. Small detachments from regiments are frequently ſent not only from one part of an iſland to another, but alſo to different iſlands; ſoldiers thus detached are very apt to be ſeized with fevers, not only from change of air, which I have before aſſerted to be a very frequent exciting cauſe, but alſo from having greater opportunities of obtaining ſpirits. The danger of following this evacuating plan in a man who has been expoſed to the influence of contagion muſt be ſtill more evident.

On the contrary, where the patient happens to be attacked, ſoon after he comes into the neighbourhood of ſwampy ſoils, not having before been expoſed to any debilitating cauſes, we ſurely may be more free in our evacuations, than in a more weakened

weakened person, or one who had been a longer resident.

In attentively weighing all these circumstances together, and judging carefully of them, and of the reigning type of diseases, and acting accordingly, is the character of the medical man to be established; for no history of diseases can be so accurate in any, but the most simple and marked cases, as to agree intirely with any one; consequently no method of cure can be so exact as not to require some variation, according to the exigencies of each particular case. All that any writer can do is to record the history of these fevers, as they are marked in the generality of cases, for no one will have every symptom, and, as the causes mix, there must often be a modification of fever, producing symptoms not perfectly agreeing with either, though at the same time there may be enough to characterise the type to which they have the greatest affinity. These diagnostic symptoms are now to be described.

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We may observe that the mode of attack differs considerably in the three fevers. While the gaol fever is commonly preceded, for some hours, often for a day or two, by languors and transient alternations of chills and flushes, and the remitting has a *rigor*, generally strong but always sufficiently evident, the ardent fever commonly makes its attack of a sudden, and with little or no *rigor*, and the patient, from being in apparent sound health, is hurried instantly into the midst of disease. The prostration of strength also, though very great both in the remitting and typhus, yet bears no proportion to that in the ardent: the pain in the head, back, and limbs is considerable in all, but in the ardent there is most commonly a violent pain in the middle of the thighs. The pain also of the head is different in the various fevers: in the ardent, it is principally fixed over the orbit of each eye; while there is only a dull heavy pain over the rest of the head: in the remitting, the pain is violent and continued over the whole head; while in the gaol fever it
seems

seems rather to be a succession of pulsations, giving an idea to the patient that his head is forcibly opening and shutting. There is little vomiting, except just in the early attack of gaol fever, but in both the others, it is a troublesome and dangerous symptom: in the remitting, there is generally a quantity of bile thrown up, frequently of a green colour, but this seldom or never happens in the ardent. So constantly indeed is this the case, that where bile is vomited up, and there has been sensible *rigor*, I should have scarcely any doubt in pronouncing the fever not to be of the ardent type: and there is also in the latter a sensation of burning at the pit of the stomach.

The countenance in the gaol fever is commonly, although slightly suffused, yet of a dirtyish hue, and by no means tumid, and there is commonly violent pulsation of the carotid arteries. In the remitting, after the hot fit is formed, the suffusion is great, but the tumour by no means so evident, particularly about the fauces and neck, as

in the ardent. The mode of speaking also is very different: in this, it is confused and thick: in the remitting, it varies only from health in a quickness, owing to the anxiety of the patient, not to any particular debility of the organs of speech; and in the gaol fever it is generally a quickness of speech for a word or two, rather as if from impatience at being disturbed, or else it is plaintive and querulous. Neither in the remitting nor typhus has the patient any of that appearance as of intoxication, which is frequently to be observed in the ardent fever.

The tongue in typhus is generally very tremulous when put out: it is from the beginning furred, and soon becomes dry and chapped; and, towards the latter stages of the disease, the tongue and lips are covered with black and loose *faburræ*, floating like cobwebs, or they have a number of *apthæ* over their surface. In the remitting, the tongue is furred, but in no great degree, and, as the disease advances, this fur be-
comes

comes brown, but there is in general some moisture on it to the last. In the ardent fever the tongue has no fur on it; on the contrary, we may call it morbidly clean: it is rather moist, and of a bright red colour: as the disease advances, it sometimes becomes dry, at others not so, but always continues clean. The thirst is not so great as we might be led to expect in this fever, from the vehemence of the symptoms, neither is it in any proportion to what is felt in the others. In this fever also, while the prostration of strength is very great, the vomiting, burning, heat of the stomach, and restlessness are violently urgent, and the heat of the skin intense. The pulse varies very inconsiderably, either in strength or quickness from its natural state, but in the other fevers, it is amongst the first symptoms to shew a derangement of the system.

The delirium is very different also: in the ardent fever, it is of the most fierce kind. The patient generally imagines him-

self in the presence of his most bitter enemies, who are either attacking him, or whom he is endeavouring to attack; the eye-balls are strained, the whole countenance puts on the most terrific aspect, and it often requires two or three persons to hold him in his bed. The delirium in the remitting is seldom so fierce; it is generally mild; the imagination of the patient busying itself with his former occupations and pursuits: while that of typhus seems scarcely to amount to more than a want of power of attention in the sick person to any thing about him; for during the time he is uttering the most incoherent nonsense, if he be roused, he gives a rational answer, but immediately relapses into his incoherent fit.

These are the symptoms which are most dissimilar in the different fevers. I have purposely omitted the yellowness of the skin, the black vomit, and the hemorrhages from different parts of the body, as
I have

I have seen them occur in every species of fever in the tropical climates.

I shall now conclude, with observing, that should this little Treatise answer the intended purpose of distinguishing the different fevers from each other, and by those means lead to a less confused practice and a more certain method of cure, and should my personal sufferings from one of them (the ardent) have led me to a single remark conducive to those ends, it will be great happiness to me to reflect that I did not suffer in vain.